

## STABILIZED MICROBUBBLE COMPOSITIONS

ABSTRACT

5 A microbubble preparation formed of a plurality of  
microbubbles comprising a first gas and a second gas  
surrounded by a membrane such as a surfactant, wherein the  
first gas and the second gas are present in a molar ratio  
of from about 1:100 to about 1000:1, and wherein the first  
10 gas has a vapor pressure of at least about (760 - x) mm Hg  
at 37°C, where x is the vapor pressure of the second gas at  
37°C, and wherein the vapor pressure of each of the first  
and second gases is greater than about 75 mm Hg at 37°C;  
also disclosed are methods for preparing microbubble  
15 compositions, including compositions that rapidly shrink  
from a first average diameter to a second average diameter  
less than about 75% of the first average diameter and are  
stabilized at the second average diameter; kits for  
preparing microbubbles; and methods for using such  
20 microbubbles as ultrasound contrast agents.

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